

# Powering the Energy Transformation through Copper Exploration



Prairie Mining Limited ASX | LSE | WSE: PDZ

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# INTRODUCING THE ARCTIC RIFT COPPER (ARC) PROJECT IN GREENLAND

*Transaction transforms Prairie into a clean-tech metals exploration company on the path to “net-zero”*

## First Mover Position

New, highly prospective, large-scale metallogenic province

## World Class Potential

Indications of an extensive mineral system but virtually unexplored

## Proof of Concept

Widespread high-grade copper occurrences at surface within large 5,774km<sup>2</sup> license area

## Successful Track Record

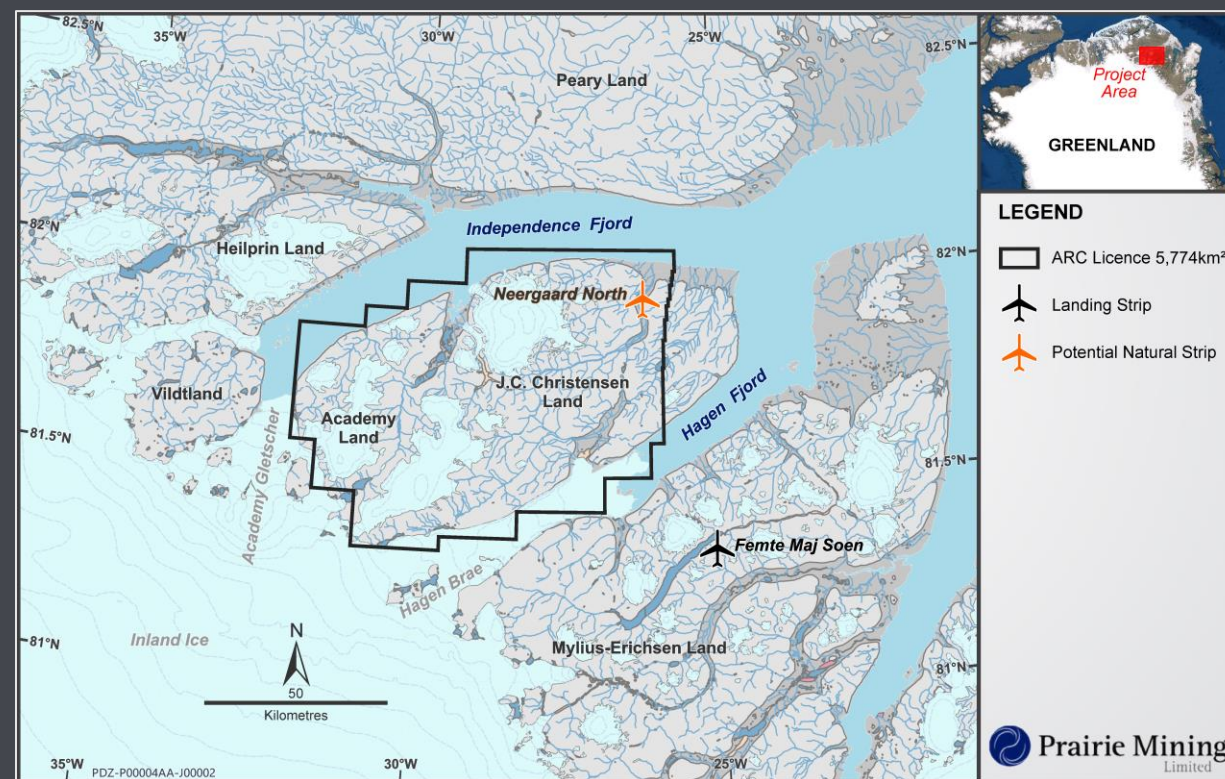
Highly experienced exploration team with track record of success in Greenland

## Greenland Advantage

Excellent mining jurisdiction attracting increased attention

## Near-term Milestones

Near-term delineation of drill ready targets with high probability of multiple discoveries



*Prairie will earn an 80% interest in ARC by spending A\$10m on the Project within five years*



# PRAIRIE'S MOVE INTO **COPPER** IS WELL-TIMED & MEASURED

1

## **Copper demand rising**

Integral component for nearly all new technology paving the way to net-zero emissions

2

## **Copper supply in deficit**

Copper consumption in the next 25 years will be more than has ever been mined - new mines must open

3

## **Discoveries few and far between**

Few major new copper discoveries in the past six years as production remains stagnant



*There is no  
decarbonisation without  
**copper***

Goldman Sachs Global Investment Research  
May 2021

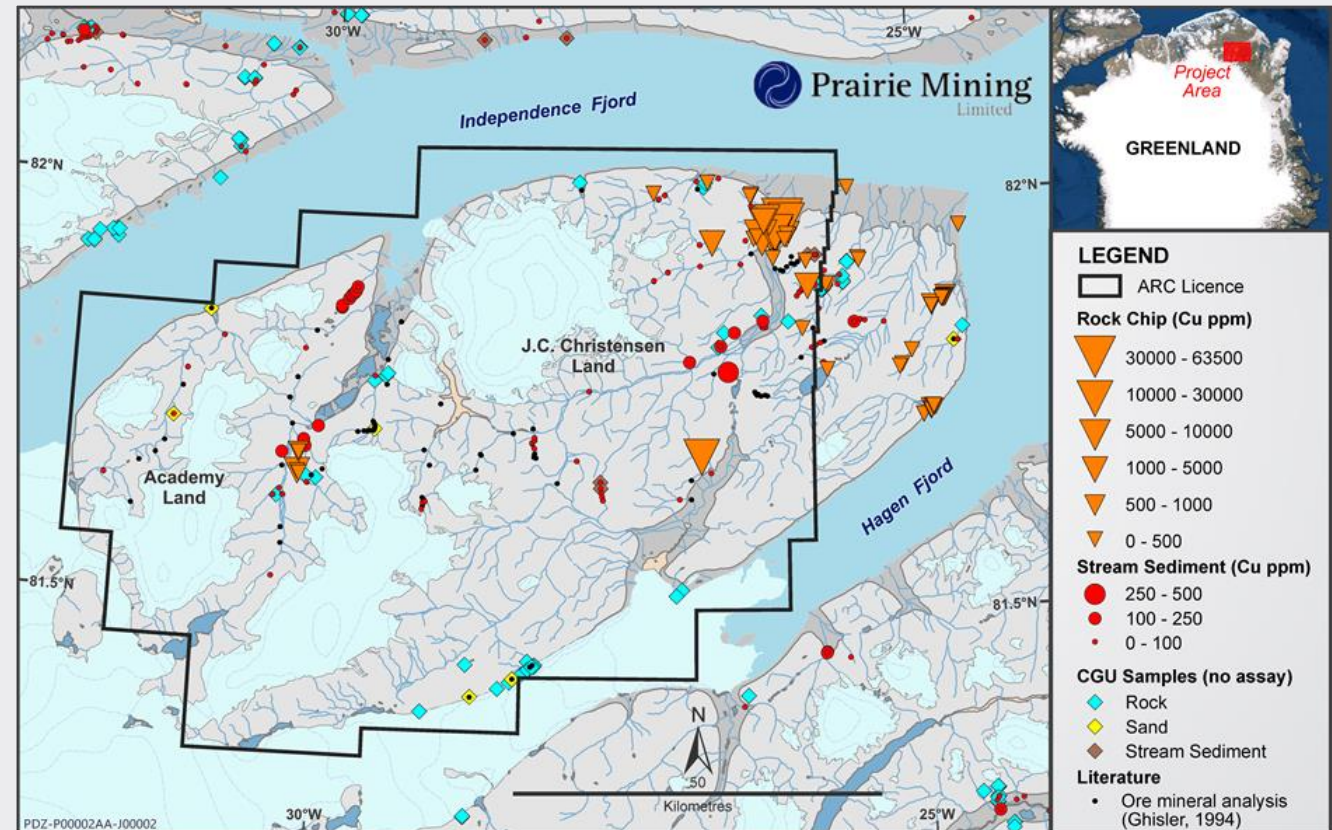
# ARC HAS POTENTIAL TO HOST WORLD-CLASS COPPER DEPOSITS

## Widespread copper at surface

- 80% of stream sediment samples contained native copper
- Native copper - clasts weighing up to 1 kg+
- High grade copper sulphides – in breccias and sediments

## Geological similarities to largest known copper systems

- ARC extensive mineral system known to be prospective for basalt, fault, and sediment-hosted copper mineralisation
- Sediment-hosted copper analogous to:
  - the Katangan Basin ('Copperbelt'),
  - the Zechstein ('European Kupferschiefer')
- Native copper analogous to:
  - Keenenaw Peninsula (Michigan)
  - Kennecott (Alaska)



## Sample assay results across ARC

- 53.8% Cu & 2,480 g/t Ag
- 20.7% Cu & 488g/t Ag
- 12.5% Cu & 385g/t Ag
- 9.0% Cu & 112g/t Ag
- 7.9% Cu & 53g/t Ag
- 5.3% Cu & 112g/t Ag
- 5.0% Cu & 304g/t Ag
- 4.0% Cu & 82g/t Ag

# GREENLAND IS ONE OF THE LAST GREAT FRONTIER MINERAL PROVINCES



Highly prospective but under-explored



Attracting increased exploration investment interest



Transparent regulatory environment

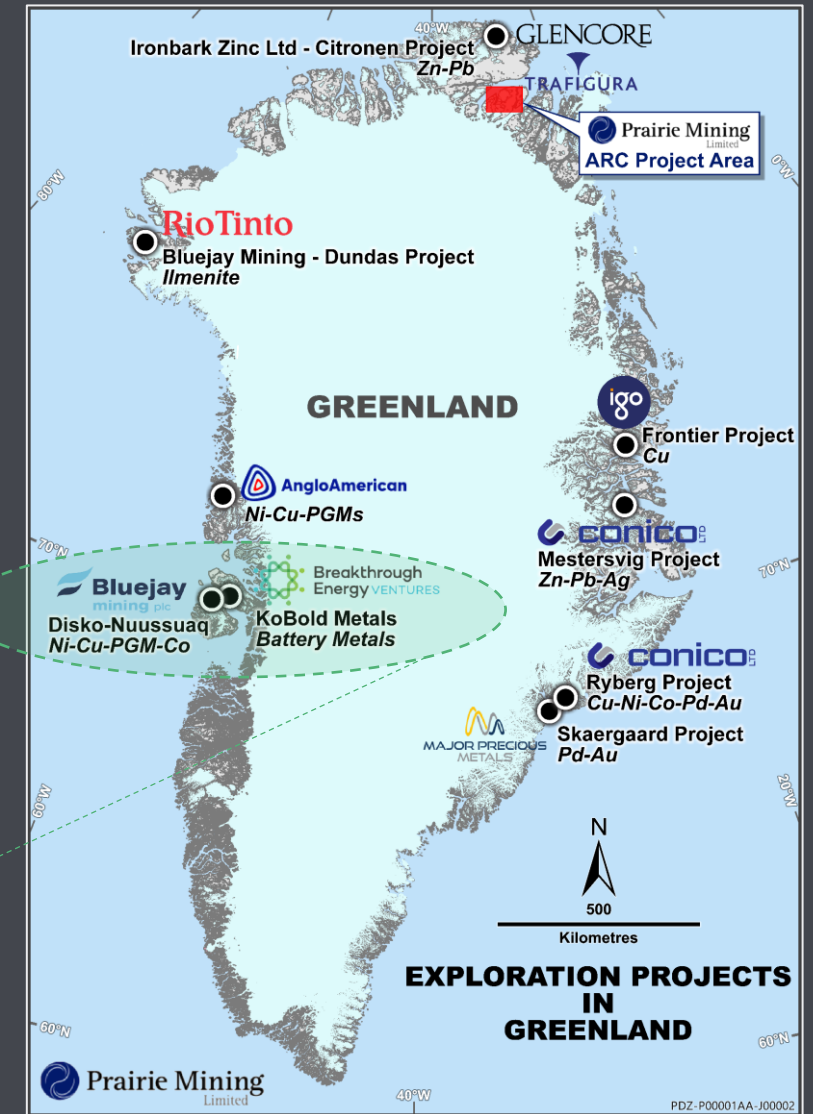


Competitive fiscal environment



*Billionaire-backed mining firm to seek electric vehicle metals in Greenland*

**- Reuters August 2021**





# TEAM'S PROVEN ABILITY TO UNLOCK GREENLAND'S MINERAL POTENTIAL

- **Greenfields Exploration (GEX) to act as project managers:** Highly qualified team led by GEX founder and principal exploration geologist, Dr Jonathan Bell
- **Extensive operating experience:** Working in Greenland since 2017, with demonstrated expertise across exploration and logistics managing the Frontier Project as part of the JV with ASX-listed IGO Ltd (ASX:IGO)
- **Award winning team:** GEX awarded “2019 Greenlandic Prospector and Developer of the Year”



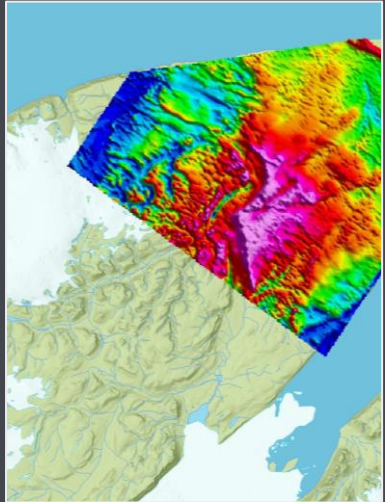
*“Greenfields Exploration's projects...the quality and methods of exploration, attitude towards high-quality data...ability to attract investment left no doubts or questions to be recognized by the Government of Greenland.”*



Note: Images not from within ARC Project area

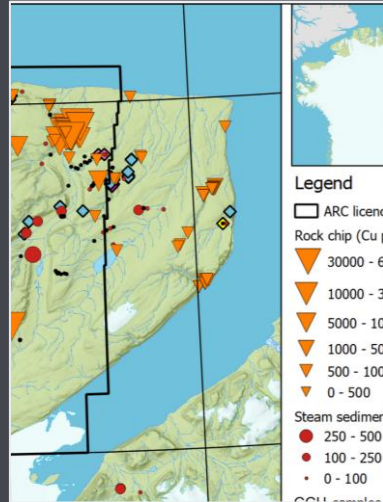
# UTILISING CUTTING-EDGE 4D MINERAL SYSTEMS ANALYSIS...

*Exploration targeting through rigorous conceptual model of how mineral endowment is concentrated within geological systems*



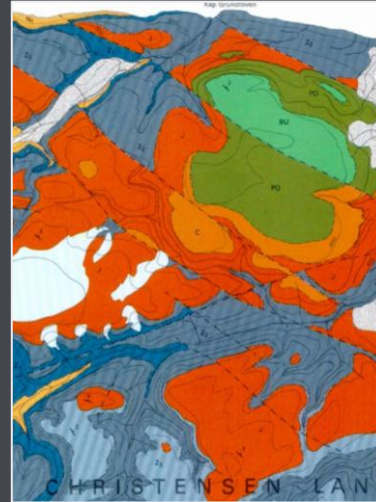
## Geophysics

Airborne gravity, magnetics and electro-magnetics defining the Minik Anomaly



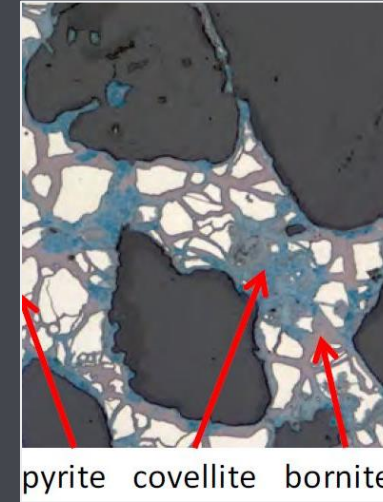
## Geochemistry

310 rock chip, trench & grab samples (c2010-11)  
145 rock chip samples (c1979-80)  
94 stream sediment samples (c1993-94)



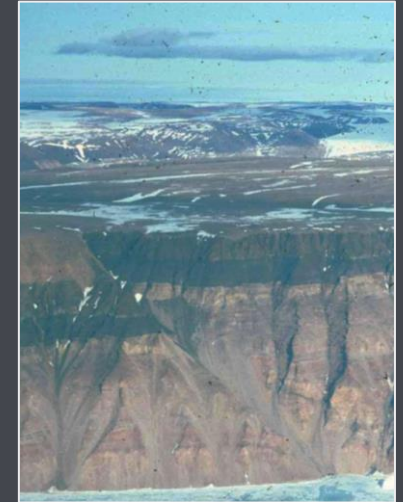
## Mapping

1:100,000 detail + Greenfields additional interpretation



## Lab work

Microprobe analysis  
XRD analysis  
Organic carbon analysis



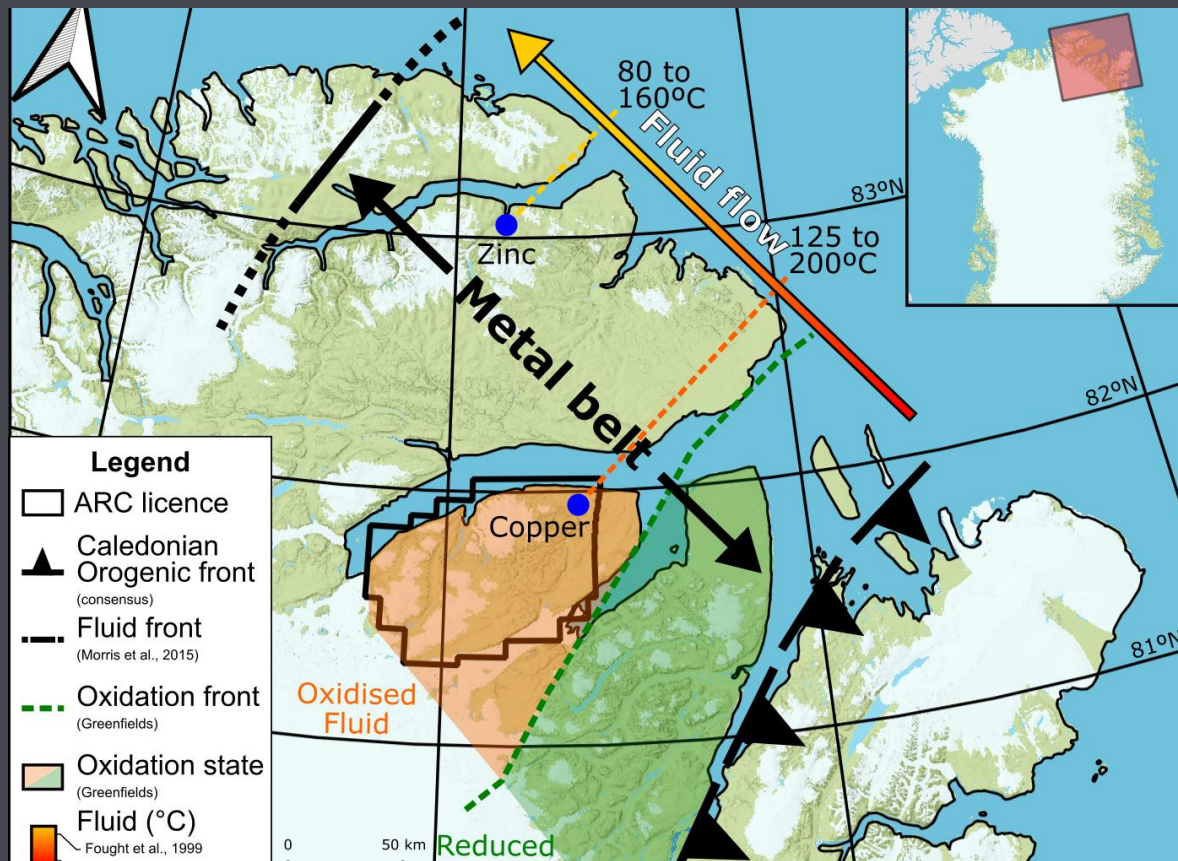
## Photography

Airborne vertical and oblique  
Satellite imagery

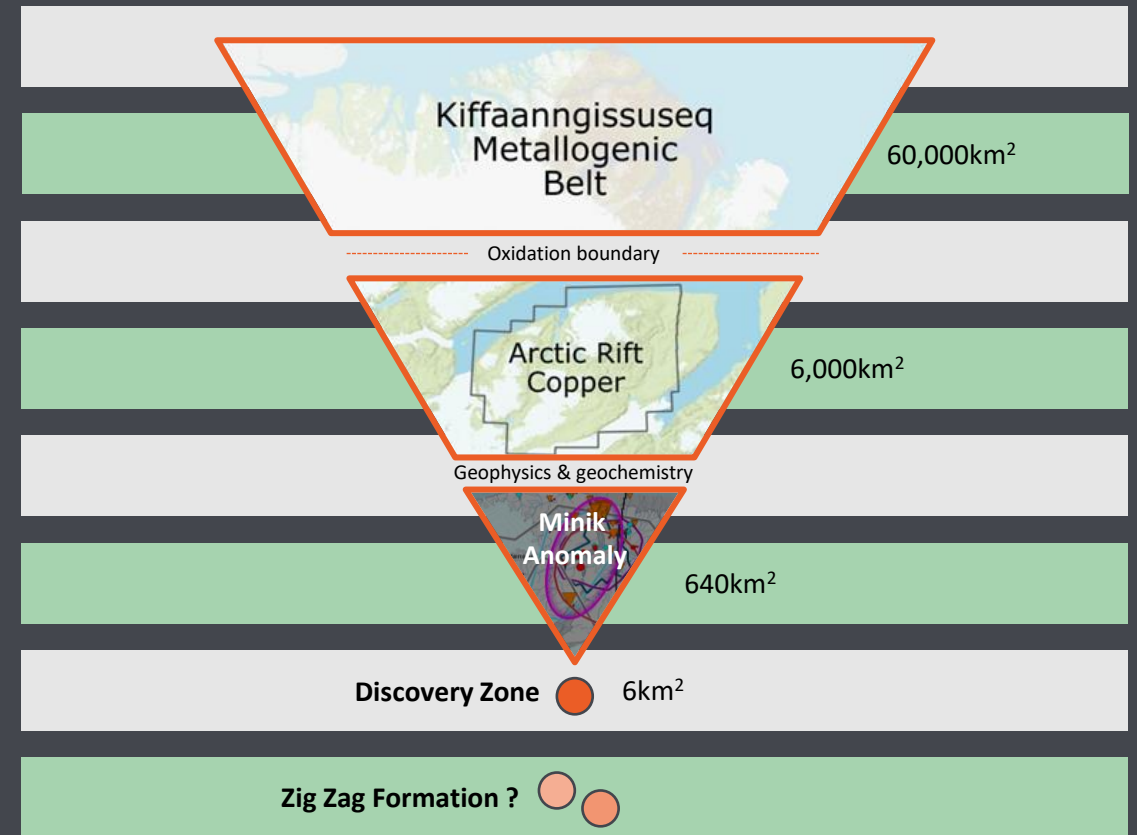


# ...DEFINED AN ENTIRE NEW METALLOGENIC PROVINCE

Major re-think of geological interpretation and metallogenesis of North Greenland



Cutting edge science to whittle down search area by 4 orders of magnitude and define priority targets



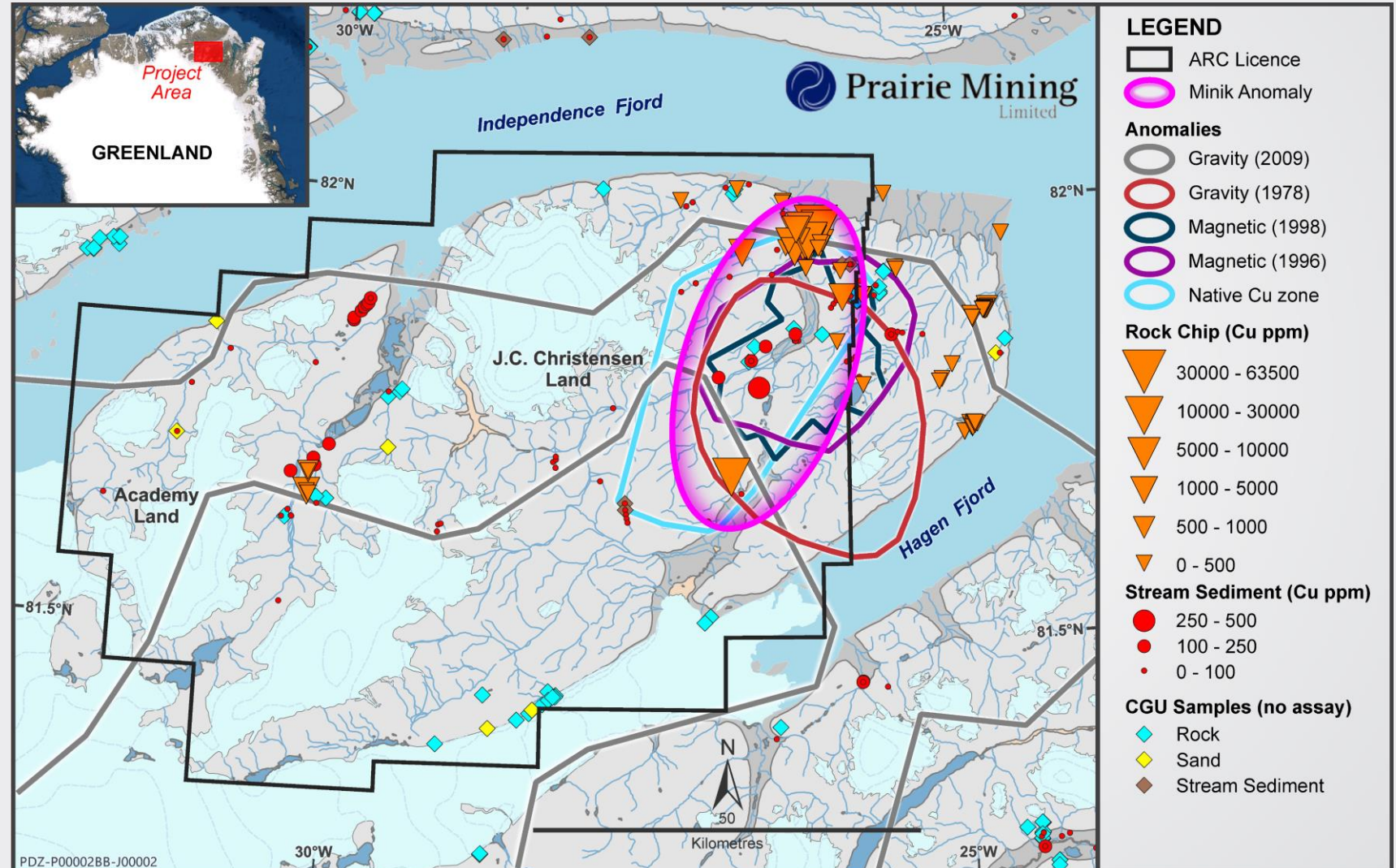


# MINIK ANOMALY WILL BE KEY FOCUS OF FIRST FIELD CAMPAIGN

~640km<sup>2</sup> area with near-term discovery potential for multiple copper deposits

Highest copper grades proximal to coincident gravity, conductivity and magnetic anomalies

Hosts the most advanced prospect within ARC – the **Discovery Zone**



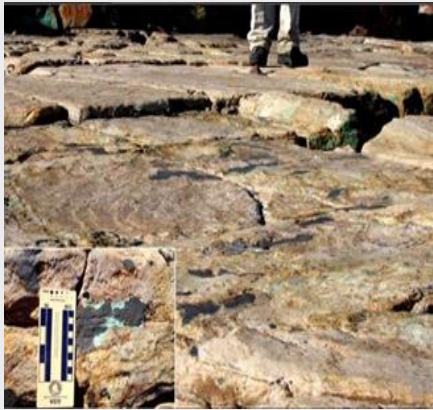


# DISCOVERY ZONE: COPPER PROSPECT DEFINED WITHIN MINIK ANOMALY

*Discovery Zone comprises three parallel breccia faults trending NW-SE, with the furthest faults being ~2km apart*

- Faults are traced for a minimum of 2km along strike before they disappear underneath moraine (cover)
- Discovery Zone is open in both directions

## Sediment-hosted



Comprises lenses and blebs of chalcocite and bornite measuring from mm-scale to 15cm long

## Breccia bound

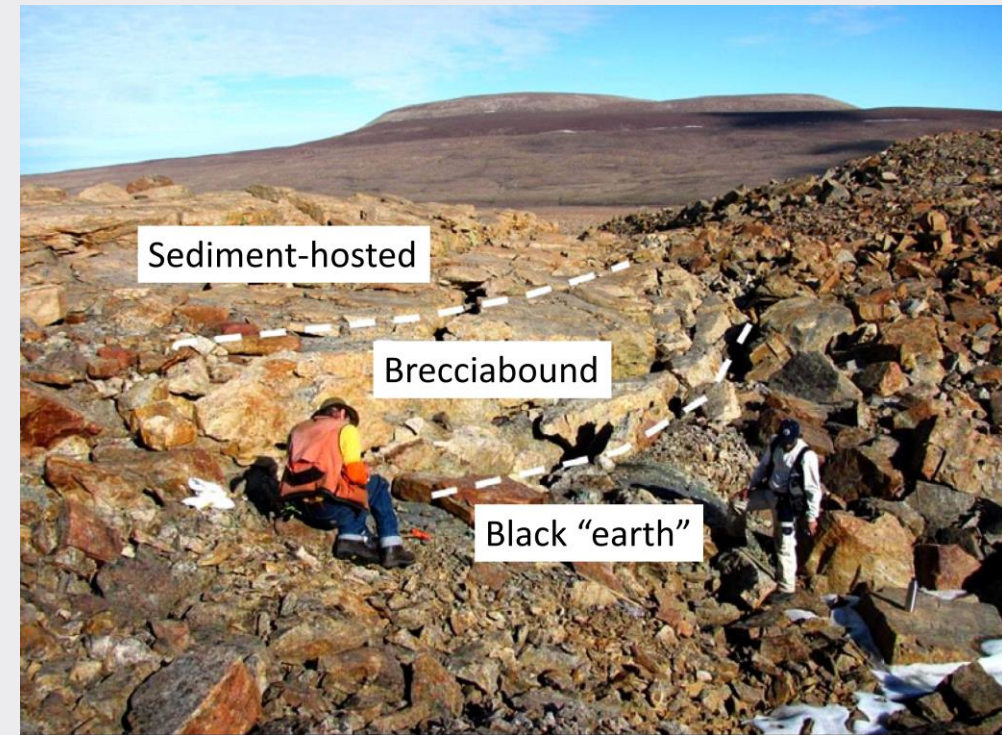


Occurs in thin quartz-dominated veining within the fault breccia and contains disseminated copper sulphides

## “Black Earth”



Unconsolidated materials containing high grades of copper and silver.  
2.15% Cu & 35.5g/t Ag over 4.5m true width reported





# ZIG ZAG FORMATION: NATIVE COPPER IN FLOOD BASALTS

*A 1.3km thick, >10,000km<sup>2</sup> flood basalt intercalated with sediments. Widespread native copper*



**1kg+**

individual clasts of native  
copper discovered



**3.17% Cu**

from chalcocite filled vesicles

Note: sample is ~4cm in width and comes from outside ARC licence

**Zig Zag flood basalts**

# ARC'S CLOSEST ANALOGUE – THE PROLIFIC UPPER PENINSULA, MICHIGAN

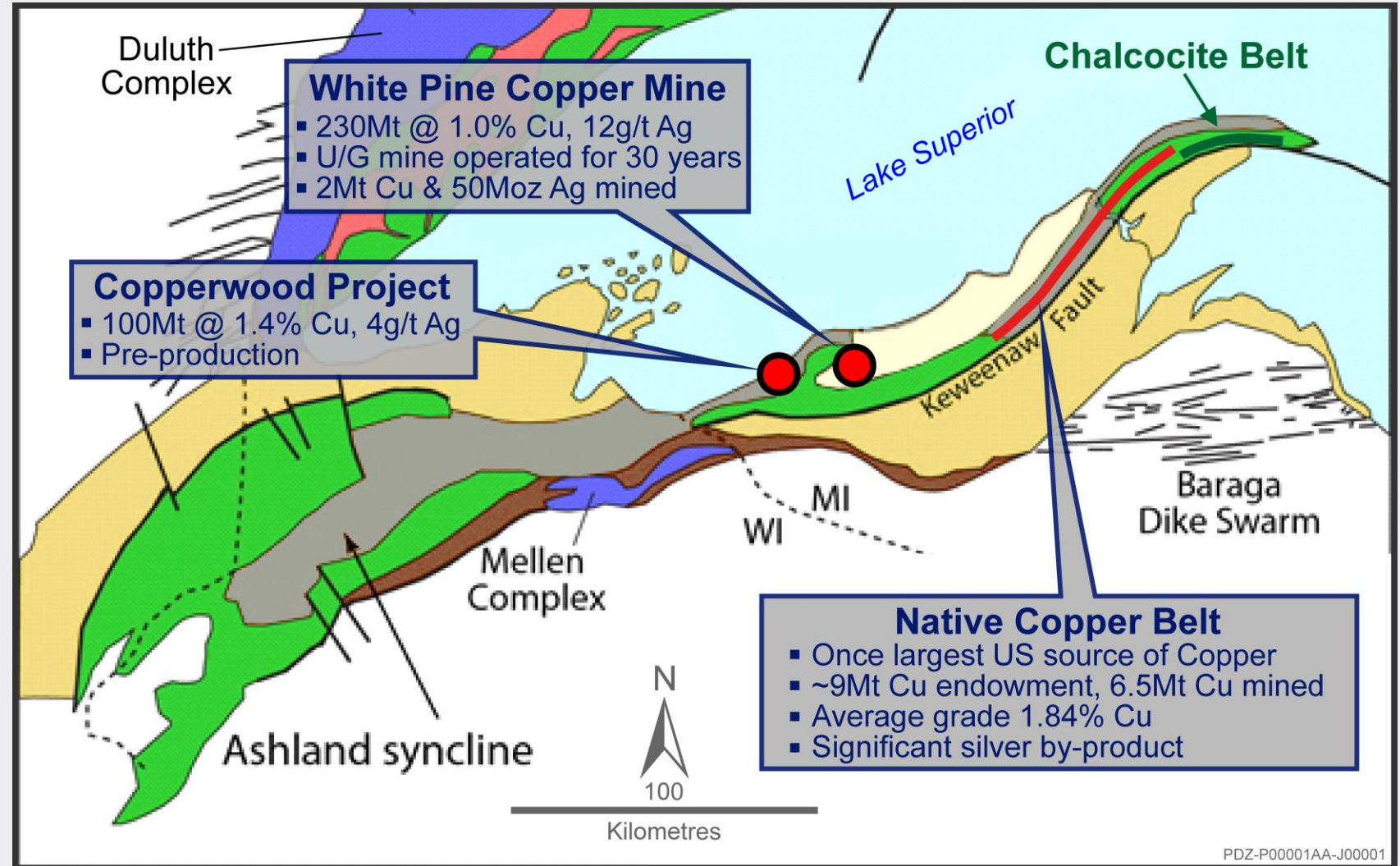
## 16Mt Cu

### Copper sulphides in sediments

- Analogous to the White Pine deposit model
- A pre-mining endowment of ~7Mt of copper sulphides

### Native copper in basalts

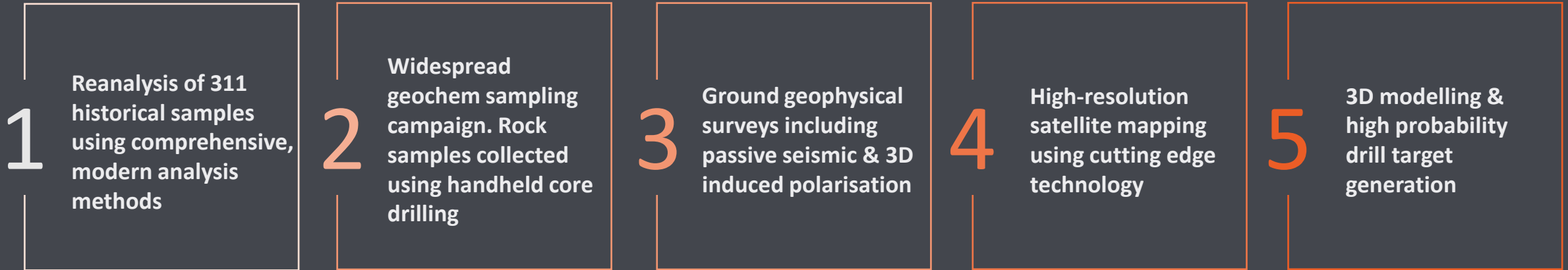
- Analogous to the Keweenaw Peninsula
- a pre-mining endowment of ~9Mt of native copper





# INNOVATIVE EXPLORATION PLAN TO CREATE NEAR-TERM VALUE

*Initial exploration program creates the potential for multiple discoveries...*



- ✓ Low environmental impact exploration program
- ✓ Use of modern prospect generation techniques
- ✓ Low cost, high impact exploration technology
- ✓ Unlocking Greenland's mineral potential safely and respectfully

# EARNING INTO ARC BENEFITS PRAIRIE SHAREHOLDERS

- 1** Low dilution entry point into the Energy Transformation via European focused copper exploration
- 2** Large concession area within newly recognized metallogenic province that remains virtually unexplored
- 3** Early-stage discovery potential with proof of concept of multiple deposit types and styles
- 4** Greenland – a mining friendly jurisdiction attracting significant investment
- 5** Extremely low environmental impact due to low biological density and minimal competing land-use



# IMPORTANT NOTICES

## Forward Looking Statements

This presentation may include forward-looking statements. These forward-looking statements are based on Prairie Mining Limited's (Prairie) expectations and beliefs concerning future events. Forward looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Prairie, which could cause actual results to differ materially from such statements. Prairie makes no undertaking to subsequently update or revise the forward-looking statements made in this announcement, to reflect the circumstances or events after the date of that announcement.

This presentation has been authorised for release by the Company's Chief Executive Officer, Mr Ben Stoikovich

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## Competent Persons Statement

The information in this presentation that relates to Exploration Results for the Arc Rift Copper Project is extracted from the ASX announcement dated 6 October 2021. Which is available to view at [www.pdz.com.au](http://www.pdz.com.au).

Prairie confirms that (a) it is not aware of any new information or data that materially affects the information included in the original announcements; (b) all material assumptions and technical parameters underpinning the content in the relevant announcements continue to apply and have not materially changed; and (c) the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcement.

# Appendices



# PRAIRIE WILL EARN AN INTEREST OF UP TO 80% IN ARC

Milestone	FIRST EARN-IN MILESTONE	SECOND EARN-IN MILESTONE	THIRD EARN-IN MILESTONE	POST THIRD EARN-IN
Terms	Prairie to spend A\$3.5m on ARC	Prairie to spend a further A\$3.5m on ARC	Prairie to spend a further A\$3.0m on ARC	Each Party must contribute on a pro-rata basis
Cumulative Expenditure	A\$3.5m	A\$7.0m	A\$10.0m	N/A
Interest	51%	Additional 19% taking total interest to 70%	Additional 10% taking total interest to 80%	If a party dilutes below 10%, its interest in ARC converts to a 1.75% NSR
Timeframe	Within three years	Four years	Five years	N/A



# "GREEN COPPER" IS VITAL TO POWERING CLEAN TECH

## Wind turbines



- ✓ Generator
- ✓ Cables

- Wind energy sector expected to account for 20% of green copper demand
- Copper usage set to grow significantly with offshore projects requiring double the copper of their onshore counterparts

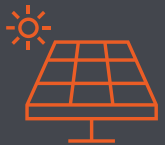
## Electric vehicles



- ✓ Charging station
- ✓ Cables
- ✓ Battery
- ✓ Motor

- EV copper usage is 5x that of petrol or diesel vehicles
- By 2030, electric vehicle production will account for 40% of green copper demand

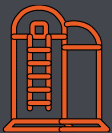
## Solar panels



- ✓ PV cells
- ✓ Cables

- Performance and efficiency of photovoltaic panels is heavily reliant on copper
- Lower future solar panel manufacturing and installation costs will drive green copper demand

## Energy storage



- ✓ Current collector

- Copper will be key for grid energy storage systems representing a key upside risk for future demand

